STIC Search Report
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STIC Database Tracking Number: 124658

TO: Ben Sackey **Location: REM-5B31&5C18** **Art Unit: 1626** **Friday, June 18, 2004** **Case Serial Number: 10/733134**	**From: Noble Jarrell** **Location: Biotech-Chem Library** **Rem 1B71** **Phone: 272-2556** **Noble.jarrell@uspto.gov**

Search Notes

124658

Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: BEN SACKEY Examiner #: 73489 Date: 6/15/04
Art Unit: 1626 Phone Number 30 2-0704 Serial Number: 10/733,134
Mail Box and Bldg/Room Location: REM 5631 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Cyclopentane(ENE)heptenoic & heptanoic acids & derivatives thereof useful as therapeutic agents

Inventors (please provide full names): Robert M. Burk

Earliest Priority Filing Date: 10/28/03

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

A compound of 7-[3α-5α-dihydroxy-2β-(3α-methoxy-1E-octenyl)-cyclopentyl]-5Z-heptenamide, composition and method of using same in treating Ocular hypertension or glaucoma.

Thanks

JUN 15 2004 (8:18) TECH CENTER

****

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Searcher: Noble Jarrell
Searcher Phone #: _____
Searcher Location: _____
Date Searcher Picked Up: 6/18/04
Date Completed: 6/18/04
Searcher Prep & Review Time: 20
Clerical Prep Time: _____
Online Time: 30

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) _____
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN 316
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems _____
WWW/Internet _____
Other (specify) _____

PTO-1590 (8-01)

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     (FILE 'HOME' ENTERED AT 11:55:26 ON 18 JUN 2004)

     FILE 'HCAPLUS' ENTERED AT 11:55:32 ON 18 JUN 2004
               E BURK R/AU
L1           88 E3,E10,E16,E21-22
L2          898 ALLERGAN?/CS,PA
L3            6 L1-2 AND HEPTANOIC ACID?/TI

     FILE 'STNGUIDE' ENTERED AT 11:58:48 ON 18 JUN 2004

     FILE 'REGISTRY' ENTERED AT 11:59:18 ON 18 JUN 2004

     FILE 'HCAPLUS' ENTERED AT 11:59:24 ON 18 JUN 2004
L4             TRA L3 1- RN :      179 TERMS

     FILE 'REGISTRY' ENTERED AT 11:59:24 ON 18 JUN 2004
L5          179 SEA L4

=> b hcap
FILE 'HCAPLUS' ENTERED AT 13:41:46 ON 18 JUN 2004
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FILE COVERS 1907 - 18 Jun 2004  VOL 140 ISS 26
FILE LAST UPDATED: 17 Jun 2004  (20040617/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d all l3 tot

L3   ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:609847  HCAPLUS
DN   139:128062
ED   Entered STN:  08 Aug 2003
TI   Method of enhancing hair growth using cyclopentane heptanoic
     acid compounds
IN   Woodward, David F.; Vandenburgh, Amanda M.
PA   Allergan, Inc., USA
SO   U.S. Pat. Appl. Publ., 11 pp.
     CODEN: USXXCO
DT   Patent
LA   English
IC   ICM  A61K031-557
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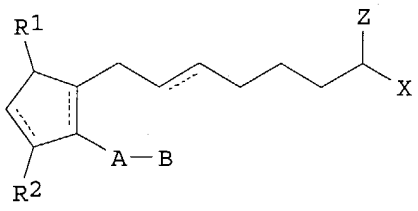
ICS A61K031-558; A61K007-06
NCL 424070100; 514568000; 514430000; 514277000; 514449000
CC 1-12 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2003147823	A1	20030807	US 2003-345788	20030115
WO 2003066008	A1	20030814	WO 2003-US3363	20030203

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-354425P P 20020204
US 2003-345788 A 20030115
OS MARPAT 139:128062
GI



I

AB Methods and compns. for stimulating the growth of hair are disclosed wherein said compns. include a cyclopentane heptanoic acid, 2-cycloalkyl or arylalkyl compound I (dashed bonds represent single or double bond which can be in the cis or trans configuration; A = alkylene or alkenylene radical; B = cycloalkyl, aryl; Z = O; X = N(R4)2; R4 = H, lower alkyl, etc.; R1, R2 = O, OH, O(CO)R6; and R6 = C1-20 (un)saturated acyclic hydrocarbon, etc.). Such compns. are used in treating the skin or scalp of a human or non-human animal. Bimatoprost is preferred for this treatment. In a patient treated for glaucoma with bimatoprost, the eyelashes had increased growth.

ST cyclopentane heptanoate compd enhancing hair growth; eyelash growth bimatoprost

IT Drug delivery systems
(aerosols; cyclopentane heptanoic acid compds. for enhancing hair growth)

IT Alopecia
Animal
Hair
Human
Mammalia
Scalp
Skin

(cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Paraffin oils
Petrolatum
Wool wax
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Eye
(eyelash; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Hair
(follicle; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Hair preparations
(growth stimulants; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Drug delivery systems
(lotions; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Drug delivery systems
(ointments, creams; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Drug delivery systems
(powders, topical, dusting; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Drug delivery systems
(solns.; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Waxes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(spermaceti; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT Drug delivery systems
(topical; cyclopentane heptanoic acid compds. for enhancing hair growth)
IT 5763-58-6D, Cyclopentane heptanoic acid, cycloalkyl or arylalkyl compds.
155206-00-1, Bimatoprost 155206-00-1D, Bimatoprost, acid addition salts
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclopentane heptanoic acid compds. for enhancing hair growth)
IT 57-55-6, Propylene glycol, biological studies 64-17-5, Ethanol, biological studies 75-71-8, Dichlorodifluoromethane 99-76-3, Methylparaben 872-50-4, N-Methyl pyrrolidone, biological studies 1314-13-2, Zinc oxide, biological studies 1320-37-2, Dichlorotetrafluoroethane 7732-18-5, Water, biological studies 8011-96-9, Calamine 8049-07-8, Tegacid 9005-65-6, Polysorbate 80 14807-96-6, Talc, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclopentane heptanoic acid compds. for enhancing hair growth)

L3 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:576688 HCAPLUS
DN 127:243271
ED Entered STN: 10 Sep 1997
TI Non-acidic cyclopentane **heptanoic acid** 2-cycloalkyl or arylalkyl derivatives as therapeutic agents
IN Woodward, David L.; Andrews, Steven W.; **Burk, Robert M.**; Garst, Michael E.
PA **Allergan, USA**
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent

LA English
IC ICM A61K031-557
CC 1-12 (Pharmacology)
Section cross-reference(s): 2, 26, 63
FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9730710	A1	19970828	WO 1997-US2269	19970213
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5688819	A	19971118	US 1996-605567	19960222
	AU 9722721	A1	19970910	AU 1997-22721	19970213
PRAI	US 1996-605567	A	19960222		
	US 1992-948056	A3	19920921		
	US 1993-154244	B1	19931118		
	US 1995-371339	A2	19950111		
	WO 1997-US2269	W	19970213		

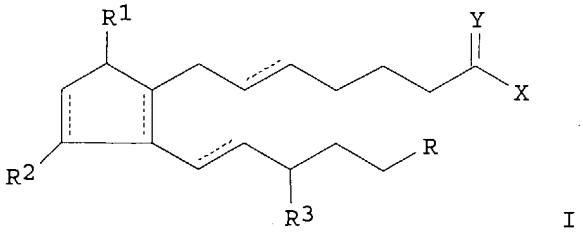
OS MARPAT 127:243271
AB The present invention provides cyclopentane heptanoic acid 2-cycloalkyl or arylalkyl compds., which may be substituted in the 1-position with amino, amido, ether, or ester groups, e.g., a 1-OH cyclopentane heptanoic acid 2-(cycloalkyl or arylalkyl) compound The cyclopentane heptanoic acid 2-(cycloalkyl or arylalkyl) compds. of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma. Moreover, the compds. of the invention are smooth muscle relaxants with broad application in e.g. systemic hypertensive and pulmonary diseases. Preparation of cyclopentane heptenamide-5-cis-2-(3α-hydroxy-4-m-chlorophenoxy-1-trans-butenyl)-1,5-dihydroxy, [1α,2β,3α,5α] is described. The ability of the compds. of the invention to lower intraocular pressure was determined
ST cyclopentane heptanoate deriv prepn therapeutic; glaucoma cyclopentane heptanoate deriv
IT Allergy inhibitors
Antihypertensives
Cardiovascular agents
Drug delivery systems
Glaucoma (disease)
Lung, disease
(cyclopentane heptanoic acid 2-cycloalkyl or arylalkyl non-acidic derivs. as therapeutic agents)
IT Digestive tract
Respiratory tract
(disease; cyclopentane heptanoic acid 2-cycloalkyl or arylalkyl non-acidic derivs. as therapeutic agents)
IT Reproduction, animal
(disorder; cyclopentane heptanoic acid 2-cycloalkyl or arylalkyl non-acidic derivs. as therapeutic agents)
IT Muscle relaxants
(smooth; cyclopentane heptanoic acid 2-cycloalkyl or arylalkyl non-acidic derivs. as therapeutic agents)
IT 40665-92-7, Cloprostenol 40665-92-7D, Cloprostenol, esters 40666-16-8, Fluprostenol 40666-16-8D, Fluprostenol, esters 54276-17-4 54276-21-0 56988-09-1 155205-90-6 155205-91-7 155205-99-5 155206-00-1 155206-01-2 155206-02-3 155206-03-4 195503-17-4 195503-18-5 195503-19-6 195503-20-9 195503-21-0 195503-22-1 195503-23-2 195503-24-3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclopentane heptanoic acid 2-cycloalkyl or arylalkyl non-acidic

derivs. as therapeutic agents)
IT 56687-85-5 73275-76-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; cyclopentane heptanoic acid 2-cycloalkyl or arylalkyl non-acidic derivs. as therapeutic agents, and preparation thereof)

L3 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:946793 HCAPLUS
DN 123:339522
ED Entered STN: 29 Nov 1995
TI Cyclopentane(ene)heptenoic or -**heptanoic acid** derivatives useful as therapeutic agents
IN **Burk, Robert M.**
PA **Allergan, Inc., USA**
SO PCT Int. Appl.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07C405-00
ICS A61K031-557
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9518102	A1	19950706	WO 1994-US13984	19941206
	W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5545665	A	19960813	US 1993-174535	19931228
	CA 2180008	AA	19950706	CA 1994-2180008	19941206
	AU 9513359	A1	19950717	AU 1995-13359	19941206
	AU 696645	B2	19980917		
	EP 737184	A1	19961016	EP 1995-904818	19941206
	EP 737184	B1	19990428		
	R: DE, ES, FR, GB, IT				
	JP 09507228	T2	19970722	JP 1994-518042	19941206
	ES 2133720	T3	19990916	ES 1995-904818	19941206
	US 5990138	A	19991123	US 1999-225034	19990104
	US 6303658	B1	20011016	US 1999-448082	19991123
	US 2002002150	A1	20020103	US 2001-919318	20010731
	US 6414022	B2	20020702		
	US 2002143054	A1	20021003	US 2002-87867	20020228
	US 6716876	B2	20040406		
PRAI	US 1993-174535	A	19931228		
	WO 1994-US13984	W	19941206		
	US 1995-445842	A3	19950711		
	US 1996-740883	A3	19961104		
	US 1997-861414	A3	19970521		
	US 1998-84805	A3	19980526		
	US 1999-225034	A1	19990104		
	US 1999-448082	A1	19991123		
	US 2001-919318	A1	20010731		

OS MARPAT 123:339522
GI



I

AB Title compds. I [R = hdyrocarbon, heteroatom-substituted hydrocarbon; R1-R3 = OH, etherified OH; X = OH, acyloxy, alkoxy, (un)substituted amino; Y = H2, O] are potent ocular hypotensives, and are particularly suitable for the management of glaucoma. Thus, PGF2α Me ester was alkylated to give a mixture of Me ethers from which the 11-Me ether was isolated. This compound lowered the intraocular pressure in dogs by 6.2 mm in 0.1% solution

ST prostaglandin F2a ether prepn ocular hypotensive

IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 170753-66-9P 170753-73-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P 170753-93-2P
170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P 170753-98-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
RL: BYP (Byproduct); PREP (Preparation)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 63598-54-9P 65844-25-9P 65844-26-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of prostaglandin derivs. as ocular hypotensives)

L3 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:420606 HCAPLUS
DN 123:983
ED Entered STN: 17 Mar 1995
TI 2-Hydrocarbyl sulfonamidomethyl Cyclopentane(ene) **heptanoic acids** and 2-hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivatives as therapeutic agents for ocular hypotension
IN Andrews, Steven W.

PA **Allergan, Inc., USA**
SO U.S., 13 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K031-215
ICS A61K031-195; C07C069-74; C07C405-00
NCL 514530000
CC 1-12 (Pharmacology)
Section cross-reference(s): 24
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5387608	A	19950207	US 1993-108209	19930817
	WO 9505178	A1	19950223	WO 1994-US9206	19940816
	W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2169744	AA	19950223	CA 1994-2169744	19940816
	AU 9475657	A1	19950314	AU 1994-75657	19940816
	EP 714303	A1	19960605	EP 1994-925885	19940816
	R: DE, ES, FR, GB, IT				
	JP 09502964	T2	19970325	JP 1994-507129	19940816
	US 5457131	A	19951010	US 1994-292543	19940818
PRAI	US 1993-108209		19930817		
	WO 1994-US9206		19940816		

OS MARPAT 123:983
AB The title compds. (Markush included) are useful as ocular hypotensives. Preparation of the compds. of the invention is described, and intraocular pressure-lowering effects of e.g. [1α,2β,3α,5α]-5-cis-2-(phenylethylsulfonamidomethyl)-3,5-dihydroxycyclopentylheptenoic acid are given.
ST cyclopentane heptanoate sulfonamidomethyl deriv hypotensive eye; cyclopentene heptanoate sulfonamidomethyl deriv hypotensive eye; heptanoate cyclopentane sulfonamidomethyl deriv hypotensive eye; heptenoate cyclopentane sulfonamidomethyl deriv hypotensive eye
IT Glaucoma (disease)
(hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptanoic acids and hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivs. as therapeutic agents for ocular hypotension, and their preparation)
IT Pharmaceutical dosage forms
(ophthalmic, hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptanoic acids and hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivs. as therapeutic agents for ocular hypotension, and their preparation)
IT 161834-06-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptanoic acids and hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivs. as therapeutic agents for ocular hypotension, and their preparation)
IT 161834-09-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);

BIOL (Biological study); PREP (Preparation); USES (Uses)
(hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptanoic acids and hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivs. as therapeutic agents for ocular hypotension, and their preparation)

IT 98-09-9, Phenylsulfonyl chloride 98-59-9, Toluenesulfonyl chloride 124-63-0, Methanesulfonyl chloride 1191-15-7, Diisobutyl aluminum hydride 1939-99-7, Benzylsulfonyl chloride 2386-60-9, n-Butanesulfonyl chloride 4025-71-2, Benzeneethanesulfonyl chloride 6303-18-0, 1-Pentanesulfonyl chloride 17814-85-6, (4-Carboxybutyl)triphenylphosphonium bromide 63014-04-0, Benzenepropanesulfonyl chloride 113566-26-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptanoic acids and hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivs. as therapeutic agents for ocular hypotension, and their preparation)

IT 58707-52-1P 58707-53-2P 58707-54-3P 161833-84-7P 161833-85-8P 161833-86-9P 161833-87-0P 161833-88-1P 161833-89-2P 161833-90-5P 161833-91-6P 161833-92-7P 161833-93-8P 162120-43-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptanoic acids and hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivs. as therapeutic agents for ocular hypotension, and their preparation)

IT 161833-94-9P 161833-95-0P 161833-96-1P 161833-97-2P 161833-98-3P 161833-99-4P 161834-00-0P 161834-01-1P 161834-02-2P 161834-03-3P 161834-04-4P 161834-05-5P 161834-07-7P
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptanoic acids and hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivs. as therapeutic agents for ocular hypotension, and their preparation)

IT 161834-08-8P 161834-10-2P 161834-11-3P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptanoic acids and hydrocarbyl sulfonamidomethyl cyclopentane(ene) heptenoic acids and their derivs. as therapeutic agents for ocular hypotension, and their preparation)

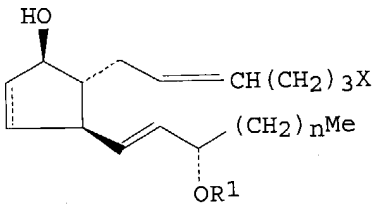
L3 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:426935 HCAPLUS
DN 121:26935
ED Entered STN: 23 Jul 1994
TI 7-(5-Substituted cyclopentyl) and (5-substituted cyclopentenyl) heptyl alcohols, heptylamines and **heptanoic acid** amines, and method of lowering intraocular pressure
IN Garst, Michael E.; **Burk, Robert**
PA **Allergan, Inc., USA**
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-557
ICS C07C405-00
CC 1-12 (Pharmacology)
Section cross-reference(s): 26

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9408587	A1	19940428	WO 1993-US10061	19931020
	W: AU, CA, CZ, HU, JP, NO, NZ				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5385945	A	19950131	US 1992-964223	19921021
	CA 2147502	AA	19940428	CA 1993-2147502	19931020
	AU 9454094	A1	19940509	AU 1994-54094	19931020
	AU 669957	B2	19960627		
	EP 665751	A1	19950809	EP 1993-924387	19931020
	EP 665751	B1	20020102		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 08502495	T2	19960319	JP 1993-510375	19931020
	AT 211386	E	20020115	AT 1993-924387	19931020
	ES 2170076	T3	20020801	ES 1993-924387	19931020
	US 5552434	A	19960903	US 1994-355463	19941214
	US 5674910	A	19971007	US 1995-572437	19951214
	US 5773654	A	19980630	US 1997-899972	19970724
PRAI	US 1992-964223	A	19921021		
	WO 1993-US10061	W	19931020		
	US 1994-355463	A3	19941214		
	US 1995-572437	A3	19951214		

OS MARPAT 121:26935

GI



I

AB Compds. I [dotted line = bond or absence of bond; wavy lines = bonds in cis or trans configuration; R1 = H, COR2 (R2 = C1-6 lower alkyl, carbocyclic aryl, heterocyclic aryl, carbocyclic aryl- or heteroaryl-substituted lower alkyl); X = CONR3R4, CH2OH, CH2OR5, CH2OCOR6, CH2NR3R4 (R3, R4 = H, lower alkyl; R5 = C1-6 lower alkyl; R6 = C1-6 lower alkyl, carbocyclic aryl, heterocyclic aryl, or carbocyclic aryl- or heteroaryl-substituted lower alkyl); n = 0-8] are capable of lowering intraocular pressure in the eye of a mammal. Preparation and intraocular pressure lowering effect of e.g. 7α-[2α-hydroxy-5β-(3α-hydroxy-1-trans-octenyl)-cyclopentyl]-5-cis-heptenol are included.

ST cyclopentyl heptyl alc deriv ocular hypotensive; heptylamine cyclopentyl deriv ocular hypotensive; heptanoic acid amine cyclopentyl deriv glaucoma; cyclopentenyl heptyl alc deriv ocular hypotensive

IT Glaucoma (disease)
(treatment of, substituted cyclopentyl and substituted cyclopentenyl heptyl alcs., heptylamines and heptanoic acid amines for)

IT 155827-47-7P 155827-48-8P 155827-49-9P 155827-50-2P 155827-52-4P 155827-53-5P 155827-56-8P 155827-60-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and intraocular pressure lowering activity of)

IT 31753-19-2P 53228-02-7P 64775-37-7P 155827-55-7P 155827-57-9P 155827-59-1P 155827-61-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in ocular hypotensive preparation)

IT 155827-51-3P 155827-54-6P 155827-58-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for ocular hypotensive preparation)

IT 75-31-0, Isopropylamine, biological studies 124-40-3, N,N-Dimethylamine, reactions 506-59-2 13345-50-1 15572-56-2, Isopropylamine hydrochloride 69739-34-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in ocular hypotensive preparation)

L3 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:315840 HCAPLUS
DN 120:315840
ED Entered STN: 25 Jun 1994
TI Nonacidic cyclopentane **heptanoic acid** 2-cycloalkyl or arylalkyl derivatives for smooth muscle relaxants and for treatment of glaucoma
IN Woodward, David F.; Andrews, Steven W.; **Burk, Robert M.**; Garst, Michael E.
PA **Allergan, Inc., USA**
SO PCT Int. Appl., 86 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-557
CC 1-12 (Pharmacology)
Section cross-reference(s): 24

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9406433	A1	19940331	WO 1993-US8472	19930909
	W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5352708	A	19941004	US 1992-948056	19920921
	EP 660716	A1	19950705	EP 1993-921435	19930909
	EP 660716	B1	20011128		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 08501310	T2	19960213	JP 1993-508155	19930909
	AU 676492	B2	19970313	AU 1993-48526	19930909
	AU 9348526	A1	19940412		
	AT 209494	E	20011215	AT 1993-921435	19930909
	ES 2166364	T3	20020416	ES 1993-921435	19930909
	PT 660716	T	20020531	PT 1993-921435	19930909
PRAI	US 1992-948056	A	19920921		
	WO 1993-US8472	W	19930909		

OS MARPAT 120:315840
AB Cyclopentane heptanoic acid, 2-cycloalkyl or arylalkyl derivs., substituted in the 1-position with halo, Me, hydroxyl, nitro, amino, amido, azido, oxime, cyano, thiol, ether or thioether groups, e.g., a 1-OH cyclopentane heptanoic acid, 2-(cycloalkyl or arylalkyl) derivs, are disclosed (Markush included). The compds. of the invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma. Moreover, the compds. of the invention are smooth muscle relaxants with broad application in systemic hypertensive and pulmonary diseases; smooth muscle relaxants with application in gastrointestinal

disease, reproduction, fertility, incontinence, shock, etc. Preparation of selected compds. is described, as are radioligand binding studies, effect on intraocular pressure, effect on smooth muscle contraction, etc.

ST cyclopentane heptanoate cycloalkl arylalkyl deriv glaucoma; smooth muscle relaxant cyclopentane heptanoate deriv

IT Allergy inhibitors
Cardiovascular agents
(nonacidic cyclopentane heptanoic acid cycloalkyl and arylalkyl derivs.)

IT Glaucoma (disease)
Shock
(treatment of, nonacidic cyclopentane heptanoic acid cycloalkyl and arylalkyl derivs. for)

IT Digestive tract
Reproductive tract
Respiratory tract
(disease, treatment of, nonacidic cyclopentane heptanoic acid cycloalkyl and arylalkyl derivs. for)

IT Muscle relaxants
(smooth, nonacidic cyclopentane heptanoic acid cycloalkyl and arylalkyl derivs.)

IT 56988-09-1 155205-88-2 155205-89-3 155205-90-6 155205-91-7
155205-92-8 155205-93-9 155205-94-0 155205-95-1 155205-96-2
155205-97-3 155205-98-4 155205-99-5 155206-00-1 155206-01-2
155206-02-3 155206-03-4
RL: BIOL (Biological study)
(for glaucoma treatment and smooth muscle relaxant)

IT 38315-47-8P 56687-85-5P 155205-89-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in nonacidic cyclopentane heptanoic acid cycloalkyl/arylalkyl derivative preparation)

IT 155205-88-2P 155205-90-6P 155205-92-8P 155205-95-1P 155206-05-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, for nonacidic cyclopentane heptanoic acid cycloalkyl/arylalkyl derivative preparation for glaucoma treatment or smooth muscle relaxant)

IT 38344-08-0 54276-21-0 155206-04-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in nonacidic cyclopentane heptanoic acid cycloalkyl/arylalkyl derivative preparation)

IT 155206-02-3 155206-06-7
RL: BIOL (Biological study)
(receptor binding competition with, nonacidic cyclopentane heptanoic acid cycloalkyl and arylalkyl derivs. for glaucoma treatment or smooth muscle relaxant in relation to)

IT 551-11-1 33854-16-9 38344-08-0 64775-47-9 64775-48-0 67508-08-1
68192-10-9 96752-55-5 155206-07-8 155206-08-9 155206-09-0
155206-10-3 155206-12-5 155322-19-3 155322-20-6
RL: PRP (Properties)
(smooth muscle stimulant property of)

IT 155206-11-4
RL: BIOL (Biological study)
(vasorelaxation response with)

=> => b home
FILE 'HOME' ENTERED AT 13:42:13 ON 18 JUN 2004

=>

=> b reg
FILE 'REGISTRY' ENTERED AT 12:51:08 ON 18 JUN 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 16 JUN 2004 HIGHEST RN 694434-66-7
DICTIONARY FILE UPDATES: 16 JUN 2004 HIGHEST RN 694434-66-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

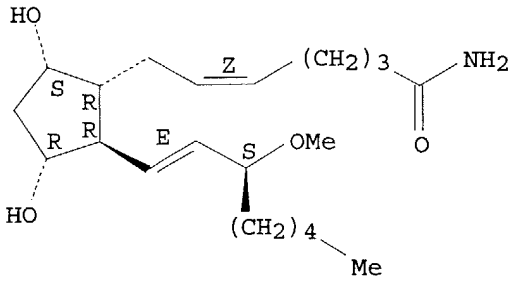
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d ide l10

L10 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 170753-89-6 REGISTRY
CN **Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN AGN 192151
FS STEREOSEARCH
MF **C21 H37 N O4**
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PROC (Process); PRP (Properties)

Absolute stereochemistry.
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> d his

(FILE 'HOME' ENTERED AT 11:55:26 ON 18 JUN 2004)

FILE 'HCAPLUS' ENTERED AT 11:55:32 ON 18 JUN 2004
E BURK R/AU
L1 88 E3,E10,E16,E21-22
L2 898 ALLERGAN?/CS,PA
L3 6 L1-2 AND HEPTANOIC ACID?/TI

FILE 'REGISTRY' ENTERED AT 11:59:18 ON 18 JUN 2004

FILE 'HCAPLUS' ENTERED AT 11:59:24 ON 18 JUN 2004
L4 TRA L3 1- RN : 179 TERMS

FILE 'REGISTRY' ENTERED AT 11:59:24 ON 18 JUN 2004
L5 179 SEA L4
L6 183 C21H37NO4
L7 2 L6 AND L5
L8 17 L6 AND NR=1 AND C5/ES
L9 5 L8 AND "PROSTA-5,13-DIEN-1-AMIDE"
L10 1 L9 AND "9,11-DIHYDROXY-15-METHOXY"
SEL RN L10
L11 0 E1/CRN

FILE 'HCAPLUS' ENTERED AT 12:45:27 ON 18 JUN 2004
L12 3 L10
L13 2 L12 AND L1
L14 2 L12 AND L2
L15 1 L12 NOT L13
L16 3 L13-14
L17 1 L12 NOT L14
L18 1 AGN 192151 OR AGN192151 OR AGN192 151 OR AGN 192 151

FILE 'USPATFULL, USPAT2' ENTERED AT 12:56:01 ON 18 JUN 2004
L19 14 L10
L20 0 (AGN 192151 OR AGN192151 OR AGN192 151 OR AGN 192 151)/TI,IT,AB
E BURK R/AU
L21 100 E11
L22 1050 ALLERGAN?/CS,PA
L23 13 L19 AND L21
L24 14 L19 AND L22
L25 1 L19 NOT L23

FILE 'HCAPLUS' ENTERED AT 13:01:00 ON 18 JUN 2004
L26 1 L15 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)

FILE 'USPATFULL, USPAT2' ENTERED AT 13:01:12 ON 18 JUN 2004
L27 1 L25 AND (PY<=2002 OR PRY<=2002 OR AY<=2002)

FILE 'HCAPLUS' ENTERED AT 13:39:18 ON 18 JUN 2004
L28 3 L12 OR L18

FILE 'REGISTRY' ENTERED AT 13:59:53 ON 18 JUN 2004
L29 349 C21H35NO4
L30 37 L29 AND NR=1 AND C5/ES

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     FILE 'HCAPLUS' ENTERED AT 14:28:04 ON 18 JUN 2004
                SEL L28 1- RE
L31         2852 E1-68

     FILE 'REGISTRY' ENTERED AT 14:30:47 ON 18 JUN 2004

     FILE 'HCAPLUS' ENTERED AT 14:30:57 ON 18 JUN 2004
L32             TRA L31 1- RN :     6154 TERMS

     FILE 'REGISTRY' ENTERED AT 14:32:21 ON 18 JUN 2004
L33          6154 SEA L32
L34             1 L6 AND L33
L35             0 L29 AND L33

     FILE 'USPATFULL, USPAT2' ENTERED AT 14:37:12 ON 18 JUN 2004
L36           SEL L19 1- REP :       71 TERMS
L37           428 L36

     FILE 'REGISTRY' ENTERED AT 14:39:00 ON 18 JUN 2004

     FILE 'USPATFULL, USPAT2' ENTERED AT 14:39:08 ON 18 JUN 2004
L38             TRA L37 1- RN :    10251 TERMS

     FILE 'REGISTRY' ENTERED AT 14:39:27 ON 18 JUN 2004
L39         10232 SEA L38
L40             4 (L6 OR L29) AND L39

     FILE 'HCAPLUS' ENTERED AT 14:41:47 ON 18 JUN 2004

     FILE 'REGISTRY' ENTERED AT 14:43:02 ON 18 JUN 2004
L41           SEL L10 1- CHEM :       2 TERMS

     FILE 'HCAPLUS' ENTERED AT 14:43:03 ON 18 JUN 2004
L42             3 S L41

=> b hcap
FILE 'HCAPLUS' ENTERED AT 13:39:44 ON 18 JUN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)
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FILE COVERS 1907 - 18 Jun 2004  VOL 140 ISS 26
FILE LAST UPDATED: 17 Jun 2004  (20040617/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE
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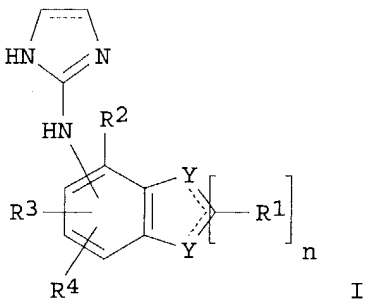
=> d all hitstr l28 tot

L28 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:703779 HCAPLUS
DN 135:251962
ED Entered STN: 26 Sep 2001
TI Combinations of prostaglandins and brimonidine or derivatives for the treatment of glaucoma and alleviation of elevated intraocular pressure
IN Garst, Michael E.
PA Allergan Sales, Inc., USA
SO U.S., 7 pp., Cont.-in-part of U.S. Ser. No. 710,636, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC A61K314-15; A61K312-15; A61K031-19
NCL 514392000
CC 1-8 (Pharmacology)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6294563	B1	20010925	US 1999-440379	19991115
	US 2002010202	A1	20020124	US 2001-903954	20010712
PRAI	US 1994-330050	B1	19941027		
	US 1996-710636	B2	19960918		
	US 1999-440379	A1	19991115		

OS MARPAT 135:251962
GI



I

AB The invention concerns combinations of alpha adrenergic agents such as brimonidine and its derivs. as represented by formula I below wherein each Y is independently selected from the group consisting of N, N-CH3, O, S and C-R1; R1 is hydrogen, lower alkyl or oxo; R2, R3 and R4 are independently selected from the group consisting of hydrogen, halogen, lower alkyl and lower alkenyl; n is an integer from 1 to 3; and a broken line beside a solid line indicates either a single or a double bond with the proviso that when n=1, both bonds from Y to C-R1 cannot be double bonds, and prostaglandins known in the art to cause lowering of intraocular pressure which are useful in compns., methods of treatment and articles of manufacture for the treatment of glaucoma and alleviation of elevated intraocular pressure and providing neuroprotection (no data).
ST prostaglandin brimonidine glaucoma intraocular pressure inhibition
IT Antiglaucoma agents
(combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)

IT Cytoprotective agents
(neuroprotectants; combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
IT Adrenoceptor agonists
(α-; combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
IT 138282-73-2
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(S-1033; combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
IT 363-24-6, PGE2 551-11-1 745-65-3, PGE1 21562-57-2, TR-4161
35121-78-9, Prostacyclin 35536-53-9, 11-Deoxy-PGE2 35700-23-3
35700-27-7 37786-06-4 38315-43-4 38315-47-8 38344-08-0
39746-23-1 39746-25-3, 16,16-Dimethyl-PGE2 40665-92-7, Cloprostenol
40666-16-8, Fluprostenol 51705-19-2 52533-44-5, CP-27987 53658-98-3,
11-Deoxy-16,16-dimethyl-PGE2 53764-89-9 53764-90-2 53764-90-2D,
derivs. 54120-61-5, Prostalene 54315-73-0 54382-24-0 54382-74-0
59122-46-2, Misoprostol 59567-61-2, K-10134 59619-81-7, Etiproston
59685-85-7, HR-466 59803-98-4, Brimonidine 59982-03-5, CS-412
60325-46-4, Sulprostone 61218-31-3, YPG-209 62524-99-6, Delprostenate
62559-74-4, ONO-995 64318-79-2, Gemeprost 67110-79-6, Luprostiol
68382-22-9, HR-601 69381-94-8, Fenprostalene 69648-08-4, TR-4752
69900-71-6, RO-221327 71116-82-0, Tiaprost 73121-56-9, RS-84-135
73647-73-1 74159-84-5 74176-31-1, Alfaprostol 74317-14-9, TR-4367
74397-12-9, ONO-1206 76822-56-5, MDL-646 77287-05-9, Rioprostil
79360-43-3, Nocloprost 79378-27-1, CL 116069 81026-63-3, Enisoprost
85923-25-7, SQ 27986 105595-17-3, ZK 110841 120891-44-3, ZK 118182
130209-82-4, (Latanoprost) 135273-43-7 155206-00-1 155925-37-4, RO
229648 155925-39-6, S-747260 155925-50-1, UFO-21 155925-56-7, ZK
138519 155925-57-8, 13,14-dihydro-ZK 138519 170552-18-8, 13,14-dihydro
ZK 118182 **170753-89-6** 361444-55-5
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)

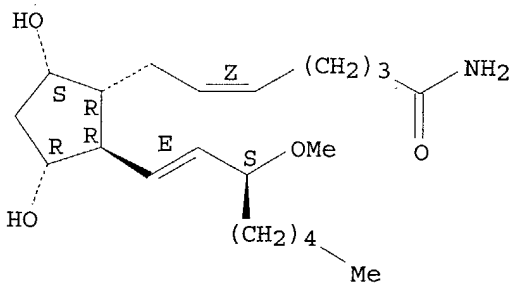
RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; WO 8502841 1985 HCAPLUS
(2) Anon; EP 289349 1988 HCAPLUS
(3) Anon; EP 299914 1989 HCAPLUS
(4) Anon; EP 364417 1990 HCAPLUS
(5) Anon; EP 366279 1990 HCAPLUS
(6) Anon; EP 399839 1990 HCAPLUS
(7) Anon; DE 3923797 1991 HCAPLUS
(8) Anon; WO 9114428 1991 HCAPLUS
(9) Anon; EP 544899 1993 HCAPLUS
(10) Anon; WO 9408585 1994 HCAPLUS
(11) Bernardy; US 4343949 1982 HCAPLUS
(12) Bito; US 4599353 1986 HCAPLUS
(13) Bito; The Ocular Effects of Prostaglandins and Other Eicosanoids 1989, P1
(14) Bundy; US 4097489 1978 HCAPLUS
(15) Chan; US 4994274 1991 HCAPLUS
(16) Chang; US 5292517 1994 HCAPLUS
(17) Danielewicz; US 3890319 1975 HCAPLUS
(18) Danielewicz; US 4029792 1977 HCAPLUS

(19) Gluchowski; US 5021416 1991 HCAPLUS
(20) Gluchowski; US 5091528 1992 HCAPLUS
(21) Hurvitz; Drugs 1991, V41(4), P514 MEDLINE
(22) Matthews; US 4576962 1986 HCAPLUS
(23) Meadows; US 5173298 1992 HCAPLUS
(24) Searle, J; Drugs Aging 1994, V5(3), P156
(25) Sih; US 4288616 1981 HCAPLUS
(26) Smith; US 4029681 1977 HCAPLUS
(27) Snitman; US 4614825 1986 HCAPLUS
(28) Strike; US 3755426 1973 HCAPLUS
(29) Weiss; US 4321405 1992 HCAPLUS
(30) Wheeler; US 5856329 1999 HCAPLUS
(31) Wissner; US 4291175 1981 HCAPLUS
(32) Woodward; US 5093329 1992 HCAPLUS
(33) Yavitz; Ocul Surg News 1999, V17(17), P28
(34) Yoles; IOVS 1999, V40(1), P65 MEDLINE
(35) Yuksel; Ophthalmologica 1999, V213(4), P228 HCAPLUS

IT **170753-89-6**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)

RN 170753-89-6 HCAPLUS
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L28 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:893929 HCAPLUS
DN 134:66281
ED Entered STN: 21 Dec 2000
TI Synthetic modification of prostaglandin F2α indicates different structural determinants for binding to the prostaglandin F receptor versus the prostaglandin transporter
AU Schuster, Victor L.; Itoh, Shigekazu; Andrews, Steven W.; Burk, Robert M.; Chen, June; Kedzie, Karen M.; Gil, Daniel W.; Woodward, David F.
CS Department of Medicine, Physiology, Albert Einstein College of Medicine, Bronx, NY, USA
SO Molecular Pharmacology (2000), 58(6), 1511-1516
CODEN: MOPMA3; ISSN: 0026-895X
PB American Society for Pharmacology and Experimental Therapeutics
DT Journal
LA English
CC 2-2 (Mammalian Hormones)

AB Several principles governing the binding of E series prostaglandins to EP receptors have emerged in recent years. The C-1 carboxyl group binds electrostatically to a conserved arginine residue in the seventh transmembrane segment of the receptor. Prostaglandin E analogs involving bioisosteric replacements of the carboxyl group, such as acylsulfonamide, are also active. In addition, structurally similar esters may also exhibit similar affinity, presumably by virtue of hydrogen bonding. Other regions of the substrate mol. appear to bind to other domains of EP receptors, either via hydrophobic interactions or by hydrogen bonding. Less information is available about the structural requirements for substrate binding to FP receptors. Prostanoids also bind to the prostaglandin transporter PGT. In this case, a conserved C-1 carboxyl group is critically important, since C-1 esters exhibit little affinity. Here we examined the binding of chemical diverse PGF2α structural analogs to the FP receptor and compared these with binding by the PG transporter. PGT recognized a wide range of anionic substituents. In contrast, the carboxylic acid group was essential for optimal binding to the FP receptor, since replacement by larger moieties with a similar pKa, such as acylsulfonamide and tetrazole, substantially decreased binding affinity. Interestingly, insertion of cyclic substituents in the omega chain increased binding to the FP receptor but reduced affinity for PGT, and substitution for the 15-hydroxyl group produced only a modest reduction in FP receptor binding, but eliminated binding by PGT. Because extracellular PGF2α may compete for binding between FP receptors and PGT, these findings have implications for designing PGF2α analogs for treating disease states.

ST prostaglandin F2alpha analog structure receptor transporter binding

IT Prostanoid receptors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(FP; synthetic modification of prostaglandin F2α indicates different structural determinants for binding to prostaglandin F receptor vs. prostaglandin transporter)

IT Structure-activity relationship
(synthetic modification of prostaglandin F2α indicates different structural determinants for binding to prostaglandin F receptor vs. prostaglandin transporter)

IT Transport proteins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(synthetic modification of prostaglandin F2α indicates different structural determinants for binding to prostaglandin F receptor vs. prostaglandin transporter)

IT 551-11-1, Prostaglandin F2α 13261-27-3, AGN 190910 40834-96-6, AGN 191995 42743-17-9, AGN 191366 52533-67-2, AGN 191365 53764-90-2 55582-75-7, 17-Phenyl PGF2α 64775-48-0, AGN 191088 68192-10-9, AGN 190911 **170753-89-6**, **AGN 192151** 315204-32-1, AGN 194394
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(synthetic modification of prostaglandin F2α indicates different structural determinants for binding to prostaglandin F receptor vs. prostaglandin transporter)

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD

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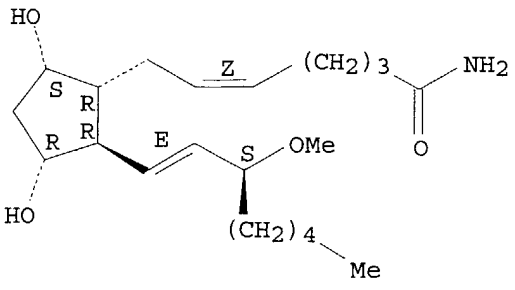
IT **170753-89-6, AGN 192151**
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(synthetic modification of prostaglandin F2α indicates different structural determinants for binding to prostaglandin F receptor vs. prostaglandin transporter)

RN 170753-89-6 HCAPLUS
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L28 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:946793 HCAPLUS
DN 123:339522
ED Entered STN: 29 Nov 1995
TI Cyclopentane(ene)heptenoic or -heptanoic acid derivatives useful as

therapeutic agents
IN Burk, Robert M.
PA Allergan, Inc., USA
SO PCT Int. Appl.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07C405-00
ICS A61K031-557
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9518102	A1	19950706	WO 1994-US13984	19941206
	W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, UZ, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5545665	A	19960813	US 1993-174535	19931228
	CA 2180008	AA	19950706	CA 1994-2180008	19941206
	AU 9513359	A1	19950717	AU 1995-13359	19941206
	AU 696645	B2	19980917		
	EP 737184	A1	19961016	EP 1995-904818	19941206
	EP 737184	B1	19990428		
	R: DE, ES, FR, GB, IT				
	JP 09507228	T2	19970722	JP 1994-518042	19941206
	ES 2133720	T3	19990916	ES 1995-904818	19941206
	US 5990138	A	19991123	US 1999-225034	19990104
	US 6303658	B1	20011016	US 1999-448082	19991123
	US 2002002150	A1	20020103	US 2001-919318	20010731
	US 6414022	B2	20020702		
	US 2002143054	A1	20021003	US 2002-87867	20020228
	US 6716876	B2	20040406		
PRAI	US 1993-174535	A	19931228		
	WO 1994-US13984	W	19941206		
	US 1995-445842	A3	19950711		
	US 1996-740883	A3	19961104		
	US 1997-861414	A3	19970521		
	US 1998-84805	A3	19980526		
	US 1999-225034	A1	19990104		
	US 1999-448082	A1	19991123		
	US 2001-919318	A1	20010731		

OS MARPAT 123:339522
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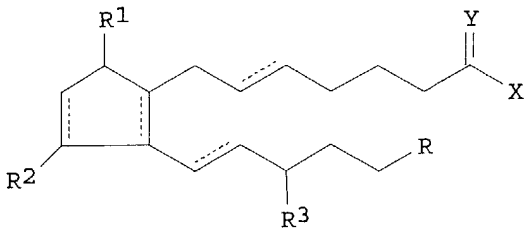


I

AB Title compds. I [R = hdyrocarbon, heteroatom-substituted hydrocarbon;

R1-R3 = OH, etherified OH; X = OH, acyloxy, alkoxy, (un)substituted amino; Y = H2, O] are potent ocular hypotensives, and are particularly suitable for the management of glaucoma. Thus, PGF2α Me ester was alkylated to give a mixture of Me ethers from which the 11-Me ether was isolated. This compound lowered the intraocular pressure in dogs by 6.2 mm in 0.1% solution

ST prostaglandin F2a ether prepn ocular hypotensive

IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 170753-66-9P 170753-73-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
RL: BYP (Byproduct); PREP (Preparation)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of prostaglandin derivs. as ocular hypotensives)

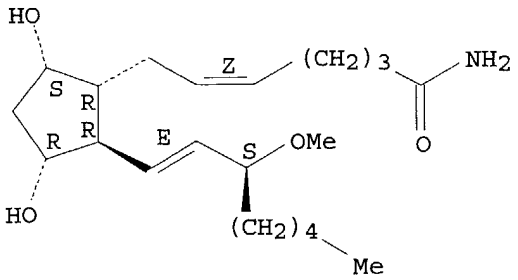
IT 63598-54-9P 65844-25-9P 65844-26-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT **170753-89-6P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of prostaglandin derivs. as ocular hypotensives)

RN 170753-89-6 HCAPLUS

CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



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CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 13:40:21 ON 18 JUN 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

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L19 ANSWER 1 OF 14 USPATFULL on STN
AN 2002:259478 USPATFULL
TI Cyclopentane(ENE)heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, UNITED STATES
PA ALLERGAN, INC. (U.S. corporation)
PI US 2002143054 A1 20021003
US 6716876 B2 20040406
AI US 2002-87867 A1 20020228 (10)
RLI Continuation of Ser. No. US 2001-919318, filed on 31 Jul 2001, PENDING Continuation of Ser. No. US 1999-448082, filed on 23 Nov 1999, GRANTED, Pat. No. US 6303658 Continuation of Ser. No. US 1999-225034, filed on 4 Jan 1999, GRANTED, Pat. No. US 5990138 Division of Ser. No. US 1998-84805, filed on 26 May 1998, GRANTED, Pat. No. US 5906989 Division of Ser. No. US 1997-861414, filed on 21 May 1997, GRANTED, Pat. No. US 5798378 Division of Ser. No. US 1996-740883, filed on 4 Nov 1996, GRANTED, Pat. No. US 5681848 Division of Ser. No. US 1995-445842, filed on 11 Jul 1995, GRANTED, Pat. No. US 5587391 Division of Ser. No. US 1993-174535, filed on 28 Dec 1993, GRANTED, Pat. No. US 5545665
DT Utility
FS APPLICATION
LREP ROBERT J. BARAN (T2-7H), ALLERGAN, INC., 2525 Dupont Drive, Irvine, CA, 92612
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1018
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxy-cyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

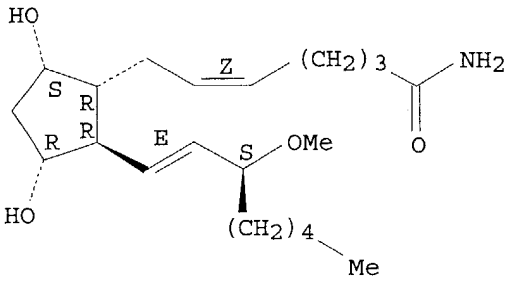
INCL INCLM: 514/530.000
INCLS: 514/559.000; 514/659.000
NCL NCLM: 514/530.000
NCLS: 514/546.000; 514/568.000; 514/573.000; 514/613.000; 514/715.000
IC [7]
ICM: A61K031-557

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

			PATENT	KIND	DATE
OS	CA 123:339522 *	WO	9518102	A1	19950706
	CA 133:252211	US	6124344	A	20000926
	CA 131:5147	WO	9925358	A1	19990527

* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α
methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-,
(5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 2 OF 14 USPATFULL on STN
AN 2002:4171 USPATFULL
TI Cyclopentane(ENE)heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, UNITED STATES
PA ALLERGAN SALES, INC. (U.S. corporation)
PI US 2002002150 A1 20020103
US 6414022 B2 20020702
AI US 2001-919318 A1 20010731 (9)
RLI Continuation of Ser. No. US 1999-448082, filed on 23 Nov 1999, PENDING Continuation of Ser. No. US 1999-225034, filed on 4 Jan 1999, GRANTED, Pat. No. US 5990138 Division of Ser. No. US 1998-84805, filed on 26 May 1998, GRANTED, Pat. No. US 5906989 Division of Ser. No. US 1997-861414, filed on 21 May 1997, GRANTED, Pat. No. US 5798378 Division of Ser. No. US 1996-740883, filed on 4 Nov 1996, GRANTED, Pat. No. US 5681848 Division of Ser. No. US 1995-445842, filed on 11 Jul 1995, GRANTED, Pat. No. US 5587391 Division of Ser. No. US 1993-174535, filed on 28 Dec 1993, GRANTED, Pat. No. US 5545665
DT Utility
FS APPLICATION
LREP ROBERT J. BARAN (T2-7H), ALLERGAN, INC., 2525 Dupont Drive, Irvine, CA, 92612
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1120
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxycyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/134.000
INCLS: 514/659.000; 514/715.000; 514/712.000
NCL NCLM: 514/530.000
NCLS: 514/546.000; 514/568.000; 514/573.000; 514/613.000; 514/715.000
IC [7]
ICM: A61K031-66
ICS: A61K031-5575; A61K031-5578

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

		PATENT	KIND	DATE
OS	CA 123:339522 *	WO 9518102	A1	19950706
	CA 133:252211	US 6124344	A	20000926
	CA 131:5147	WO 9925358	A1	19990527

* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P

170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)

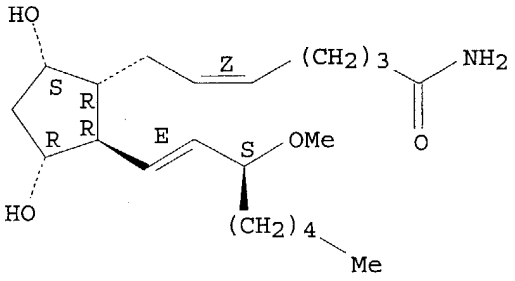
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)

RN 170753-89-6 USPATFULL

CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 3 OF 14 USPATFULL on STN

AN 2001:179150 USPATFULL

TI Cyclopentane heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents

IN Burk, Robert M., Laguna Beach, CA, United States

PA Allergan Sales, Inc., Irvine, CA, United States (U.S. corporation)

PI US 6303658 B1 20011016

AI US 1999-448082 19991123 (9)

RLI Continuation of Ser. No. US 1999-225034, filed on 4 Jan 1999, now patented, Pat. No. US 5990138, issued on 23 Nov 1999 Division of Ser. No. US 1998-84805, filed on 26 May 1998, now patented, Pat. No. US 5906989, issued on 25 May 1999 Division of Ser. No. US 1997-861414, filed on 21 May 1997, now patented, Pat. No. US 5798378, issued on 25 Aug 1998 Division of Ser. No. US 1996-740883, filed on 4 Nov 1996, now patented, Pat. No. US 5681848, issued on 28 Oct 1997 Division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391, issued on 11 Dec 1996 Division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665, issued on 13 Aug 1996

DT Utility

FS GRANTED

EXNAM Primary Examiner: Lambkin, Deborah C.

LREP Baran, Robert J., Voet, Martin A., Fisher, Carlos A.

CLMN Number of Claims: 9

ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1135
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxy-cyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/613.000
INCLS: 564/189.000
NCL NCLM: 514/613.000
NCLS: 564/189.000
IC [7]
ICM: A01N037-18
EXF 564/189; 514/613
ARTU 166

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

			PATENT	KIND	DATE
OS	CA 123:339522 *	WO	9518102	A1	19950706
	CA 133:252211	US	6124344	A	20000926
	CA 131:5147	WO	9925358	A1	19990527

* CA Indexing for this record included
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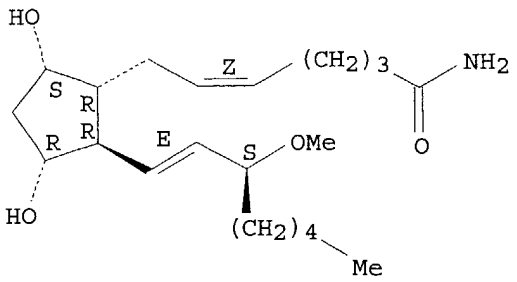
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 4 OF 14 USPATFULL on STN
AN 2001:163229 USPATFULL
TI Combinations of prostaglandins and brimonidine or derivatives thereof
IN Garst, Michael E., Newport Beach, CA, United States
PA Allergan Sales, Inc., Irvine, CA, United States (U.S. corporation)
PI US 6294563 B1 20010925
AI US 1999-440379 19991115 (9)
RLI Continuation-in-part of Ser. No. US 1998-710636, filed on 17 Mar 1998, now abandoned Continuation of Ser. No. US 1994-330050, filed on 27 Oct 1994, now abandoned
DT Utility
FS GRANTED
EXNAM Primary Examiner: Fay, Zohreh
LREP O'Donohue, Cynthia, Fisher, Carlos, Baran, Robert
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 605
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention concerns combinations of alpha adrenergic agents such as brimonidine and its derivatives as represented by formula (I) below
##STR1##

wherein each Y is independently selected from the group consisting of N, N--CH3, O, S and C--R.sub.1 ; R.sub.1 is hydrogen, lower alkyl or oxo; R.sub.2, R.sub.3 and R.sub.4 are independently selected from the group consisting of hydrogen, halogen, lower alkyl and lower alkenyl; n is an integer from 1 to 3; and a broken line beside a solid line indicates either a single or a double bond with the proviso that when n=1, both bonds from Y to C--R1 cannot be double bonds,

and prostaglandins known in the art to cause lowering of intraocular pressure

which are useful in compositions, methods of treatment and articles of manufacture for the treatment of glaucoma and alleviation of elevated intraocular pressure and providing neuroprotection.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/392.000
INCLS: 514/530.000; 514/573.000; 514/912.000; 514/913.000
NCL NCLM: 514/392.000
NCLS: 514/530.000; 514/573.000; 514/912.000; 514/913.000
IC [7]
ICM: A61K031-415
ICS: A61K031-215; A61K031-19

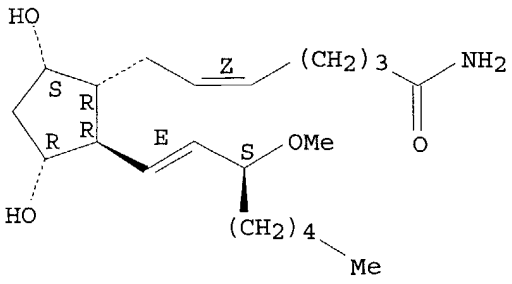
EXF 514/530; 514/573; 514/912; 514/913; 514/393
ARTU 164

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

	PATENT	KIND	DATE
OS CA 125:67796	WO 9613267	A2	19960509
CA 135:251962 *	US 6294563	B1	20010925

* CA Indexing for this record included
CC 1-8 (Pharmacology)
ST prostaglandin brimonidine glaucoma intraocular pressure inhibition
IT Antiglaucoma agents
(combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
IT Cytoprotective agents
(neuroprotectants; combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
IT Adrenoceptor agonists
(α-; combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
IT 138282-73-2
(S-1033; combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
IT 363-24-6, PGE2 551-11-1 745-65-3, PGE1 21562-57-2, TR-4161
35121-78-9, Prostacyclin 35536-53-9, 11-Deoxy-PGE2 35700-23-3
35700-27-7 37786-06-4 38315-43-4 38315-47-8 38344-08-0
39746-23-1 39746-25-3, 16,16-Dimethyl-PGE2 40665-92-7, Cloprostenol
40666-16-8, Fluprostenol 51705-19-2 52533-44-5, CP-27987
53658-98-3, 11-Deoxy-16,16-dimethyl-PGE2 53764-89-9 53764-90-2
53764-90-2D, derivs. 54120-61-5, Prostalene 54315-73-0 54382-24-0
54382-74-0 59122-46-2, Misoprostol 59567-61-2, K-10134 59619-81-7,
Etiproston 59685-85-7, HR-466 59803-98-4, Brimonidine 59982-03-5,
CS-412 60325-46-4, Sulprostone 61218-31-3, YPG-209 62524-99-6,
Delprostenate 62559-74-4, ONO-995 64318-79-2, Gemeprost 67110-79-6,
Luprostiol 68382-22-9, HR-601 69381-94-8, Fenprostalene 69648-08-4,
TR-4752 69900-71-6, RO-221327 71116-82-0, Tiaprost 73121-56-9,
RS-84-135 73647-73-1 74159-84-5 74176-31-1, Alfaprostol
74317-14-9, TR-4367 74397-12-9, ONO-1206 76822-56-5, MDL-646
77287-05-9, Rioprostil 79360-43-3, Nocloprost 79378-27-1, CL 116069
81026-63-3, Enisoprost 85923-25-7, SQ 27986 105595-17-3, ZK 110841
120891-44-3, ZK 118182 130209-82-4, (Latanoprost) 135273-43-7
155206-00-1 155925-37-4, RO 229648 155925-39-6, S-747260
155925-50-1, UFO-21 155925-56-7, ZK 138519 155925-57-8,
13,14-dihydro-ZK 138519 170552-18-8, 13,14-dihydro ZK 118182
170753-89-6 361444-55-5
(combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
IT **170753-89-6**
(combinations of prostaglandins and brimonidine or derivs. for treatment of glaucoma and alleviation of elevated intraocular pressure)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 5 OF 14 USPATFULL on STN
AN 2001:93539 USPATFULL
TI Cyclopentane heptan(ene)oic acid, 2-heteroarylalk(en)yl derivatives as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan Sales, Inc., United States (U.S. corporation)
PI US 6248773 B1 20010619
AI US 2000-643330 20000822 (9)
RLI Continuation of Ser. No. US 1999-243344, filed on 1 Feb 1999 Continuation of Ser. No. US 1997-974067, filed on 19 Nov 1997, now patented, Pat. No. US 6124344 Continuation-in-part of Ser. No. US 1997-861414, filed on 21 May 1997, now patented, Pat. No. US 5798378 Division of Ser. No. US 1996-740883, filed on 4 Nov 1996, now patented, Pat. No. US 5681848 Division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391 Division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665
DT Utility
FS GRANTED
EXNAM Primary Examiner: Seaman, D. Margaret
LREP Baran, Robert J., Voet, Martin A., Fisher, Carlos A.
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 949
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the use of cyclopentane heptan(ene)oic acid, 2-heteroarylalk(en)yl derivatives as ocular hypotensives. The compounds used in accordance with the invention are represented by the following formula I: ##STR1##

wherein the hatched segments represent α bonds, the solid triangle represents a β bond, wavy line attachments indicate either the alpha (α) or beta (β) configuration; dashed bonds represent a double bond or a single bond, R is a substituted hetero aryl radical having at least two pendant substituents selected from the group consisting of C.sub.1 to C.sub.6 alkyl; halogen; trifluoromethyl; COR.sup.1 ; COCF.sub.3 ; SO.sub.2 NR.sup.1 ; NO.sub.2 and CN or at least one cyano group; R.sup.1 is hydrogen or a lower alkyl radical having up to six carbon atoms; X is selected from the group consisting of --OR.sup.1 and --N(R.sup.1).sub.2 ; Y is .dbd.O or represents 2 hydrogen radicals, and the 9, 11, or 15 alkyl esters thereof; provided, however, when said heteroaryl radical is a dichlorothienyl radical, said compound is not a 1-carboxylic acid or amide thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/438.000
INCLS: 514/445.000; 514/448.000; 514/471.000; 514/472.000; 514/473.000;

514/461.000; 549/061.000; 549/062.000; 549/064.000; 549/066.000;
549/068.000; 549/070.000; 549/073.000; 549/078.000; 549/474.000;
549/475.000; 549/476.000; 549/479.000; 549/480.000; 549/483.000;
549/502.000

NCL NCLM: 514/438.000
NCLS: 514/445.000; 514/448.000; 514/461.000; 514/471.000; 514/472.000;
514/473.000; 549/061.000; 549/062.000; 549/064.000; 549/066.000;
549/068.000; 549/070.000; 549/073.000; 549/078.000; 549/474.000;
549/475.000; 549/476.000; 549/479.000; 549/480.000; 549/483.000;
549/502.000

IC [7]
ICM: A61K031-38
ICS: A61K031-34; C07D333-38; C07D307-02; C07D333-16

EXF 549/61; 549/62; 549/64; 549/66; 549/68; 549/70; 549/73; 549/78; 549/474;
549/475; 549/476; 549/479; 549/480; 549/483; 549/502; 514/445; 514/448;
514/438; 514/471; 514/472; 514/473; 514/461

ARTU 165

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

	PATENT	KIND	DATE
OS CA 123:339522 *	WO 9518102	A1	19950706
CA 133:252211	US 6124344	A	20000926
CA 131:5147	WO 9925358	A1	19990527

* CA Indexing for this record included

CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2

ST prostaglandin F2a ether prepn ocular hypotensive

IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α
methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)

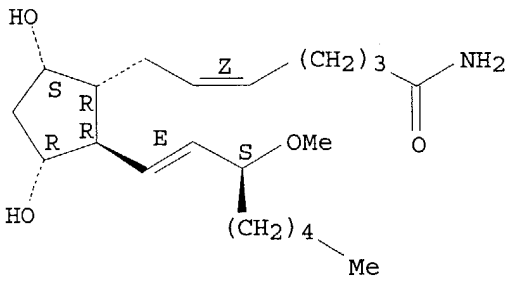
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)

RN 170753-89-6 USPATFULL

CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-,
(5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 6 OF 14 USPATFULL on STN
AN 2000:168176 USPATFULL
TI Cyclopentane heptan(ene)oic acid, 2-heteroarylalkenyl derivatives as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan Sales, Inc., Irvine, CA, United States (U.S. corporation)
PI US 6160129 20001212
AI US 1999-243344 19990201 (9)
RLI Continuation of Ser. No. US 1997-974067, filed on 19 Nov 1997 which is a continuation-in-part of Ser. No. US 1997-861414, filed on 21 May 1997, now patented, Pat. No. US 5798378 which is a division of Ser. No. US 1996-740883, filed on 4 Nov 1996, now patented, Pat. No. US 5681848 which is a division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391 which is a division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665
DT Utility
FS Granted
EXNAM Primary Examiner: Seaman, D. Margaret
LREP Baran, Robert J., Fisher, Carlos A., Voet, Martin A.
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 831
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the use of derivatives of F-type prostaglandins as ocular hypotensives. The compounds used in accordance with the invention are represented by the following formula I: ##STR1## wherein wavy line attachments indicate either the alpha (α) or beta (β) configuration; hatched segments indicate α configuration; the solid triangle is used to indicate β configuration; dashed bonds represent a double bond, or a single bond; R is a substituted heteroaryl radical having at least two pendant substituents selected from the group consisting of C.sub.1 to C.sub.6 alkyl; halogen; trifluoromethyl; COR.sup.1 ; COCF.sub.3 ; SO.sub.2 NR.sup.1 ; NO.sub.2 and CN or at least one cyano group; R.sup.1 is hydrogen or a lower alkyl radical having up to six carbon atoms, X is selected from the group consisting of --OR.sup.1 and --N(R.sup.1).sub.2 ; Y is .dbd.O or represents 2 hydrogen radicals and the 9, 11 or 15 lower alkyl esters thereof; provided, however, when said heteroaryl radical is a dichlorothienyl radical, the compound is not a 1-carboxylic acid or amide thereof. Certain of the compounds represented by Formula I are novel and comprise another aspect of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 549/061.000
INCLS: 549/077.000; 549/078.000; 549/079.000; 549/474.000; 549/491.000;

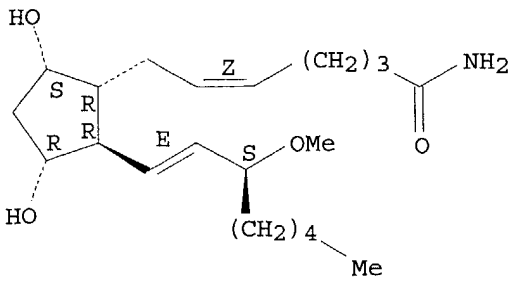
549/496.000; 549/498.000; 549/502.000; 514/438.000; 514/461.000
NCL NCLM: 549/061.000
NCLS: 549/077.000; 549/078.000; 549/079.000; 549/474.000; 549/491.000; 549/496.000; 549/498.000; 549/502.000
IC [7]
ICM: A61K031-34
ICS: A61K031-38; C07D307-02; C07D333-24; C07D333-38
EXF 514/438; 514/461; 546/61; 546/77; 546/78; 546/79; 546/474; 546/491; 546/496; 546/498; 546/502
ARTU 162

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

		PATENT	KIND	DATE
OS	CA 123:339522 *	WO 9518102	A1	19950706
	CA 133:252211	US 6124344	A	20000926
	CA 131:5147	WO 9925358	A1	19990527

* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 7 OF 14 USPATFULL on STN
AN 1999:151241 USPATFULL
TI Cyclopentane (ene) heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan, Irvine, CA, United States (U.S. corporation)
PI US 5990138 19991123
AI US 1999-225034 19990104 (9)
RLI Division of Ser. No. US 1998-84805, filed on 26 May 1998, now patented, Pat. No. US 5906989 which is a division of Ser. No. US 1997-861414, filed on 21 May 1997, now patented, Pat. No. US 5798378 which is a division of Ser. No. US 1996-740883, filed on 4 Nov 1996, now patented, Pat. No. US 5681848 which is a division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391 which is a division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665
DT Utility
FS Granted
EXNAM Primary Examiner: Lambkin, Deborah C.
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1069
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxycyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

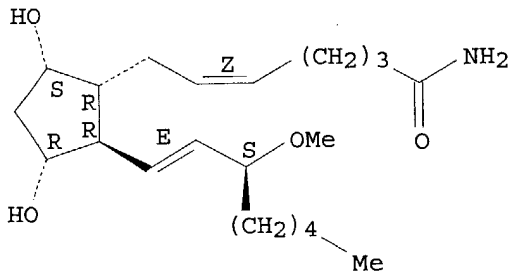
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/357.000
INCLS: 560/121.000
NCL NCLM: 514/357.000
NCLS: 560/121.000
IC [6]
ICM: A61K031-215
ICS: C07C069-74
EXF 560/121; 514/530
ARTU 163

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

PATENT	KIND	DATE

OS CA 123:339522 * WO 9518102 A1 19950706
CA 133:252211 US 6124344 A 20000926
CA 131:5147 WO 9925358 A1 19990527
* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α
methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-,
(5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 8 OF 14 USPATFULL on STN
AN 1999:61175 USPATFULL
TI Cyclopentane(ENE) heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan Sales, Inc., Irvine, CA, United States (U.S. corporation)
PI US 5906989 19990525
AI US 1998-84805 19980526 (9)
RLI Division of Ser. No. US 1997-861414, filed on 21 May 1997, now patented, Pat. No. US 5798378 which is a division of Ser. No. US 1996-740883, filed on 4 Nov 1996, now patented, Pat. No. US 5681848, issued on 28 Oct

1997 which is a division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391, issued on 24 Dec 1996 which is a division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665, issued on 13 Aug 1996

DT Utility
FS Granted
EXNAM Primary Examiner: Lambkin, Deborah C.
LREP Baran, Robert J., Voet, Martin A., Fisher, Carlos A.
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1134
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxy-cyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/357.000
INCLS: 514/277.000; 514/471.000; 514/461.000; 514/530.000; 514/532.000; 514/561.000; 514/570.000; 514/646.000; 546/329.000; 546/334.000; 546/339.000; 546/340.000; 546/341.000; 549/491.000; 549/496.000
NCL NCLM: 514/357.000
NCLS: 514/277.000; 514/461.000; 514/471.000; 514/530.000; 514/532.000; 514/561.000; 514/570.000; 514/646.000; 546/329.000; 546/334.000; 546/339.000; 546/340.000; 546/341.000; 549/491.000; 549/496.000
IC [6]
ICM: A61K031-44
ICS: A61K031-505; C07D211-70; C07D209-04
EXF 546/329; 546/334; 546/339-341; 514/357; 514/277; 514/471; 514/461; 514/530; 514/532; 514/561; 514/570; 514/646; 549/491; 549/496
ARTU 163

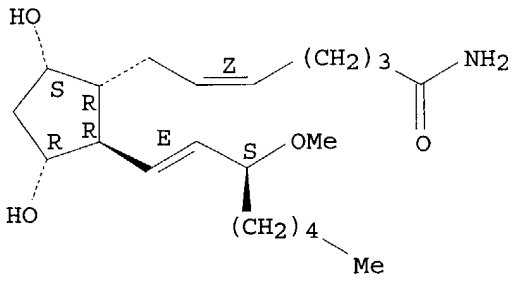
CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

			PATENT	KIND	DATE
OS	CA 123:339522	* WO	9518102	A1	19950706
	CA 133:252211	US	6124344	A	20000926
	CA 131:5147	WO	9925358	A1	19990527

* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 9 OF 14 USPATFULL on STN
AN 1998:101669 USPATFULL
TI Cyclopentane(ene) heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan, Waco, TX, United States (U.S. corporation)
PI US 5798378 19980825
AI US 1997-861414 19970521 (8)
RLI Division of Ser. No. US 1996-740883, filed on 4 Nov 1996, now patented, Pat. No. US 5681848 which is a division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391 which is a division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665
DT Utility
FS Granted
EXNAM Primary Examiner: Lambkin, Deborah C.
LREP Baran, Robert J., Voet, Martin A., Lambert, Howard R.
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1018
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxycyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/438.000

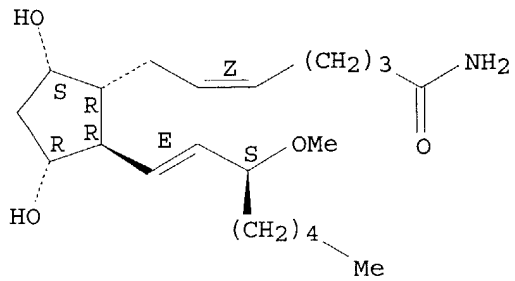
INCLS: 549/075.000; 549/076.000; 549/077.000; 549/078.000; 549/079.000
NCL NCLM: 514/438.000
NCLS: 549/075.000; 549/076.000; 549/077.000; 549/078.000; 549/079.000
IC [6]
ICM: A61K031-38
ICS: C07D333-12; C07D333-16; C07D333-24
EXF 574/438; 549/75; 549/76; 549/77; 549/78; 549/79; 549/74
ARTU 163

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

	PATENT	KIND	DATE
OS CA 123:339522 *	WO 9518102	A1	19950706
CA 133:252211	US 6124344	A	20000926
CA 131:5147	WO 9925358	A1	19990527

* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α
methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-,
(5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 10 OF 14 USPATFULL on STN
AN 97:99299 USPATFULL
TI Cyclopentane(ene) heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan, Waco, TX, United States (U.S. corporation)
PI US 5681848 19971028
AI US 1996-740883 19961104 (8)
RLI Division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391 which is a division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665, issued on 13 Aug 1996
DT Utility
FS Granted
EXNAM Primary Examiner: Dees, Jose G.; Assistant Examiner: Cebulak, Mary C.
LREP Baran, Robert J., Voet, Martin A., Lambert, Howard R.
CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1007
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxycyclopentyl(enyl)]heptanoic or heptenoic acids and derivatives of said adds, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/471.000
INCLS: 514/912.000; 549/498.000
NCL NCLM: 514/471.000
NCLS: 514/912.000; 549/498.000
IC [6]
ICM: A61K031-34
ICS: C07D307-36
EXF 514/471; 514/912; 549/498
ARTU 129

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

			PATENT	KIND	DATE
OS	CA 123:339522 *	WO	9518102	A1	19950706
	CA 133:252211	US	6124344	A	20000926
	CA 131:5147	WO	9925358	A1	19990527

* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P

170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)

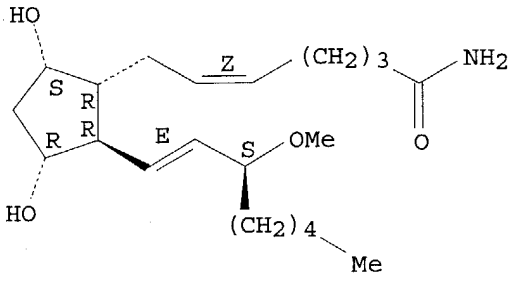
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)

IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)

RN 170753-89-6 USPATFULL

CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 11 OF 14 USPATFULL on STN

AN 96:118603 USPATFULL

TI Cyclopentane(ene) heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents

IN Burk, Robert M., Laguna Beach, CA, United States

PA Allergan, Waco, TX, United States (U.S. corporation)

PI US 5587391 19961224

AI US 1995-445842 19950711 (8)

RLI Division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665

DT Utility

FS Granted

EXNAM Primary Examiner: Raymond, Richard L.; Assistant Examiner: Lambkin, Deborah

LREP Baran, Robert J., Voet, Martin A., Lambert, Howard R.

CLMN Number of Claims: 9

ECL Exemplary Claim: 1

DRWN 4 Drawing Figure(s); 4 Drawing Page(s)

LN.CNT 999

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxycyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and

are particularly suitable for the management of glaucoma.

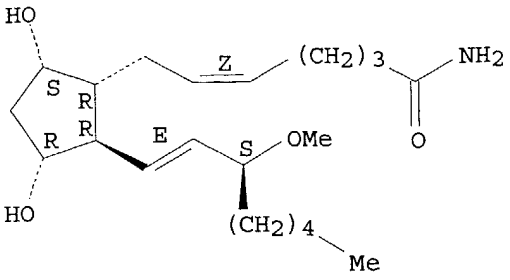
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/357.000
INCLS: 546/337.000
NCL NCLM: 514/357.000
NCLS: 546/337.000
IC [6]
ICM: A61K031-44
ICS: C07D213-56
EXF 546/290; 546/304; 546/312; 546/311; 546/326; 546/345; 546/340; 546/341; 546/344; 546/337; 514/345; 514/347; 514/352; 514/354; 514/357
ARTU 129

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

		PATENT	KIND	DATE
OS	CA 123:339522 *	WO 9518102	A1	19950706
	CA 133:252211	US 6124344	A	20000926
	CA 131:5147	WO 9925358	A1	19990527

* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 12 OF 14 USPATFULL on STN
AN 96:72913 USPATFULL
TI Cyclopentane(ene) heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan, Waco, TX, United States (U.S. corporation)
PI US 5545665 19960813
AI US 1993-174535 19931228 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Raymond, Richard L.; Assistant Examiner: Lambkin, Deborah
LREP Baran, Robert J., Voet, Martin A., Lambert, Howard R.
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1164
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxycyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

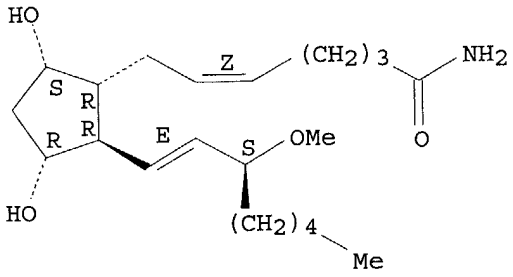
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/530.000
INCLS: 514/573.000; 514/613.000; 514/659.000; 514/729.000; 560/121.000; 562/503.000; 562/504.000; 562/510.000; 564/189.000; 564/453.000; 564/454.000; 568/838.000
NCL NCLM: 514/530.000
NCLS: 514/573.000; 514/613.000; 514/659.000; 514/729.000; 560/121.000; 562/503.000; 562/504.000; 562/510.000; 564/189.000; 564/453.000; 564/454.000; 568/838.000
IC [6]
ICM: A61K031-25
ICS: A61K031-557; C07C405-00; C07C233-00
EXF 562/503; 562/504; 562/510; 514/530; 514/659; 514/573; 514/613; 514/729; 560/121; 568/838; 564/189; 564/453; 564/454
ARTU 129

CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

	PATENT	KIND	DATE
OS CA 123:339522 *	WO 9518102	A1	19950706

CA 133:252211 US 6124344 A 20000926
CA 131:5147 WO 9925358 A1 19990527
* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α
methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPATFULL
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-,
(5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 13 OF 14 USPAT2 on STN
AN 2002:259478 USPAT2
TI Cyclopentane(ENE)heptenoic or heptanoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan, Inc., Irvine, CA, United States (U.S. corporation)
PI US 6716876 B2 20040406
AI US 2002-87867 20020228 (10)
RLI Continuation of Ser. No. US 2001-919318, filed on 31 Jul 2001
Continuation of Ser. No. US 1999-448082, filed on 23 Nov 1999, now patented, Pat. No. US 6303658 Continuation of Ser. No. US 1999-225034, filed on 4 Jan 1999, now patented, Pat. No. US 5990138, issued on 23 Nov

1999 Division of Ser. No. US 1998-84805, filed on 26 May 1998, now patented, Pat. No. US 5906989, issued on 25 May 1999 Division of Ser. No. US 1997-861414, filed on 21 May 1997, now patented, Pat. No. US 5798378, issued on 25 Aug 1998 Division of Ser. No. US 1996-740883, filed on 4 Nov 1996, now patented, Pat. No. US 5681848, issued on 28 Oct 1997 Division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391, issued on 4 Dec 1996 Division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665, issued on 13 Aug 1996

DT Utility
FS GRANTED
EXNAM Primary Examiner: Gorsth, Robert
LREP Baran, Robert J., Voet, Martin A., Fisher, Carlos A.
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 978
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxy-cyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/530.000
INCLS: 514/573.000; 514/546.000; 514/568.000; 514/613.000; 514/715.000
NCL NCLM: 514/530.000
NCLS: 514/546.000; 514/568.000; 514/573.000; 514/613.000; 514/715.000
IC [7]
ICM: A61K031-5575
EXF 514/530; 514/573; 514/346; 514/568; 514/613; 514/715
ARTU 166

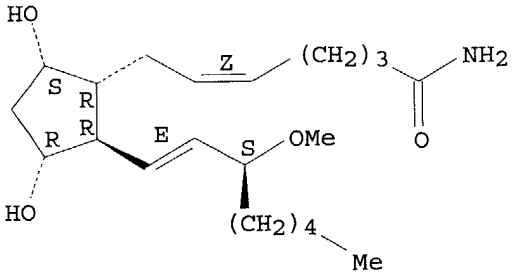
CHEMICAL ABSTRACTS INDEXING COPYRIGHT 2004 ACS on STN

			PATENT	KIND	DATE
OS	CA 123:339522	* WO	9518102	A1	19950706
	CA 133:252211	US	6124344	A	20000926
	CA 131:5147	WO	9925358	A1	19990527

* CA Indexing for this record included
CC 26-3 (Biomolecules and Their Synthetic Analogs)
Section cross-reference(s): 2
ST prostaglandin F2a ether prepn ocular hypotensive
IT Glaucoma (disease)
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 170753-66-9P 170753-73-8P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 73726-97-3P 79743-27-4P 136198-86-2P 170753-65-8P 170753-67-0P
170753-68-1P 170753-69-2P 170753-70-5P 170753-71-6P 170753-72-7P
170753-74-9P 170753-75-0P 170753-76-1P 170753-77-2P 170753-78-3P
170753-79-4P 170753-80-7P 170753-81-8P 170753-82-9P 170753-83-0P
170753-84-1P 170753-85-2P 170753-86-3P 170753-87-4P 170753-88-5P
170753-89-6P 170753-90-9P 170753-91-0P 170753-92-1P
170753-93-2P 170753-94-3P 170753-95-4P 170753-96-5P 170753-97-6P
170753-98-7P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 40834-99-9P 73726-94-0P 73726-96-2P 170753-99-8P

(preparation of prostaglandin derivs. as ocular hypotensives)
IT 551-11-1, Prostaglandin F2α 33854-16-9, Prostaglandin F2α methyl ester 53764-90-2 170754-00-4 170754-01-5 170754-02-6
(preparation of prostaglandin derivs. as ocular hypotensives)
IT 63598-54-9P 65844-25-9P 65844-26-0P
(preparation of prostaglandin derivs. as ocular hypotensives)
IT **170753-89-6P**
(preparation of prostaglandin derivs. as ocular hypotensives)
RN 170753-89-6 USPAT2
CN Prosta-5,13-dien-1-amide, 9,11-dihydroxy-15-methoxy-, (5Z,9α,11α,13E,15S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L19 ANSWER 14 OF 14 USPAT2 on STN
AN 2002:4171 USPAT2
TI Cyclopentane(ENE)heptenoic or heptenoic acids and derivatives thereof useful as therapeutic agents
IN Burk, Robert M., Laguna Beach, CA, United States
PA Allergan Sales, Inc., Irvine, CA, United States (U.S. corporation)
PI US 6414022 B2 20020702
AI US 2001-919318 20010731 (9)
RLI Continuation of Ser. No. US 1999-448082, filed on 23 Nov 1999, now patented, Pat. No. US 6303658 Continuation of Ser. No. US 1999-225034, filed on 4 Jan 1999, now patented, Pat. No. US 5990138, issued on 23 Nov 1999 Division of Ser. No. US 1998-84805, filed on 26 May 1998, now patented, Pat. No. US 5906989, issued on 25 May 1999 Division of Ser. No. US 1997-861414, filed on 21 May 1997, now patented, Pat. No. US 5798378, issued on 25 Aug 1998 Division of Ser. No. US 1996-740883, filed on 4 Nov 1996, now patented, Pat. No. US 5681848, issued on 28 Oct 1997 Division of Ser. No. US 1995-445842, filed on 11 Jul 1995, now patented, Pat. No. US 5587391, issued on 4 Dec 1996 Division of Ser. No. US 1993-174535, filed on 28 Dec 1993, now patented, Pat. No. US 5545665, issued on 13 Aug 1996
DT Utility
FS GRANTED
EXNAM Primary Examiner: Gerstl, Robert
LREP Baran, Robert J., Voet, Martin A., Fisher, Carlos A.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1081
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to 7-[5-hydroxy-2-(hydroxyhydrocarbyl or heteroatom-substituted hydroxy hydrocarbyl)-3-hydroxy-cyclopentyl(enyl)] heptanoic or heptenoic acids and derivatives of said acids, wherein one

or more of said hydroxy groups are replaced by an ether group. The compounds of the present invention are potent ocular hypotensives, and are particularly suitable for the management of glaucoma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/530.000
INCLS: 514/573.000; 514/546.000; 514/568.000; 514/613.000; 514/715.000
NCL NCLM: 514/530.000
NCLS: 514/546.000; 514/568.000; 514/573.000; 514/613.000; 514/715.000
IC [7]
ICM: A61K031-5575
EXF 514/530; 514/573; 514/715; 514/568; 514/613; 514/546
ARTU 166

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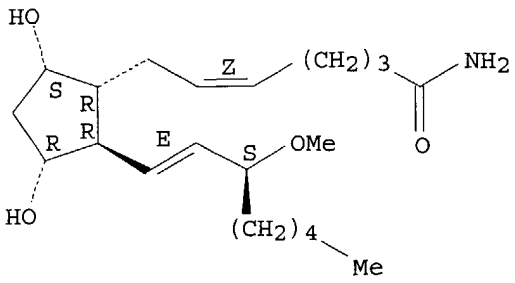

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